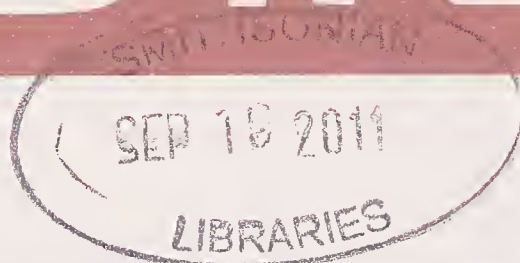


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Vol. 7, No. 4

SPOTS and STRIPES



Winter 1970-71

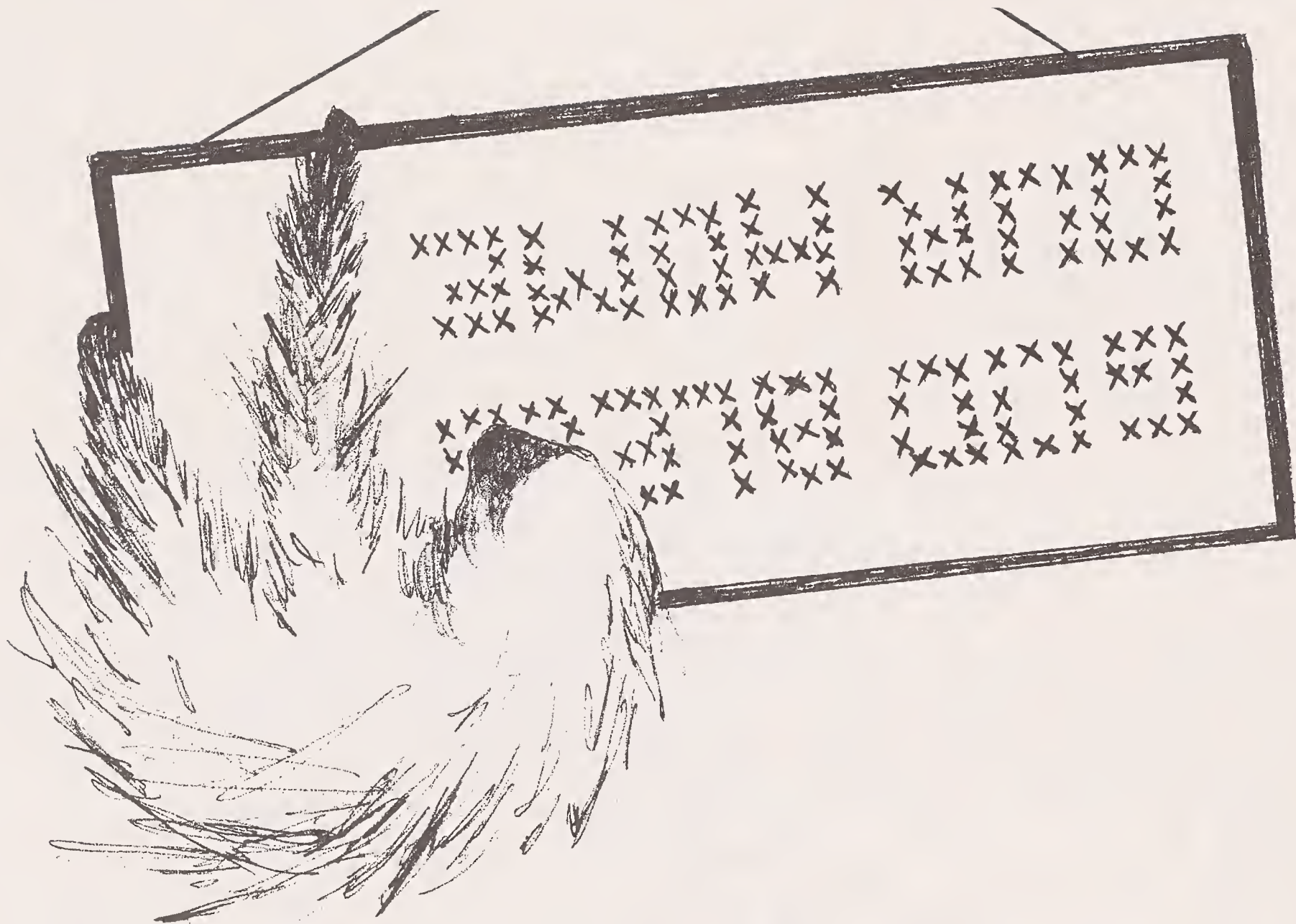


Shy, graceful, and small, the delicate little dik-diks are spending the winter in the Lion House. These two females have been joined by a male from the Philadelphia Zoo. Kirk's dik-dik is the smallest of the East African antelopes and is found throughout the year in the driest and most arid wildernesses, where for several months there are no ponds of water and no rain. Moisture is obtained from the juices of the vegetation on which they feed and from the night dew. The extendable, retractable proboscis is a fascinating adaptation but its exact function is unknown.

- Photo by Bernie Boston

published by **FRIENDS OF THE NATIONAL ZOO**

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For years I have preached that wild animals do not make suitable house pets — and during the course of those years I have harbored under my roof no less than three skunks, one agile wallaby, two ferrets, a squirrel monkey, two kinkajous, one potto, assorted hedgehogs, a boa or two, a couple of screech owls, an opossum, and last and longest tenured one butterball male two-toed sloth named Mary Jane who still shares my nest. So I should know. Wild animals do not belong in the average home. Preferring to believe that I live in an average home, I rationalize this hypocrisy of mine on the grounds that I was a zoo employee. That helps a little to excuse my former transgressions, but two years ago I traded in the National Zoological Park for a husband and life in suburban New York, and Mary Jane came along. Backed into a corner I am really pretty hard pressed to justify why MJ is still living with me instead of hanging out down in the Lion House with the rest of her kind. Except that I became “emotionally involved” (as Dr. Reed delicately puts it) or hooked on MJ, and after sharing room and board for almost five years it would have been impossible for us to part — as far as I was concerned.

I first met Mary Jane in the old animal hospital in August, 1964. She was two weeks old at the time (her body the size of a tennis ball) and covered with

velvety dark brown fur. Rejected by her mother shortly after birth, she lay in an incubator helplessly clinging to a towel. One look, and I obviously fell, hook, line and sinker, for I remember Veterinarian Clint Gray saying “You don’t want to fool with that thing, do you, Mac? and I said “Un huh.”

In time I was to learn much about the two-toed sloth, *Choloepus didactylus*, but the first thing I learned was that although the adults are hardy zoo specimens, the infants are difficult to rear and bottle-feed because the babies, lying face down on the upside-down mother, suckle against gravity. Infant sloths are also difficult to sex, which accounts for the misnomer.

“Mary Jane” hit and stuck early while trying in vain to coax her to eat pablum. Milne’s old poem kept coming to mind . . .

“What is the matter with Mary Jane?
She’s perfectly well and she hasn’t a pain
And it’s lovely rice pudding for dinner again!
What is the matter with Mary Jane?”

It wasn’t until some months later (when we were reasonably certain she would live) that I got around

to taking her down to the Smithsonian's Mammal Division and enlisting Dr. Handley's aid in sexing sloths and I discovered she was a boy. But it was too late, MJ would always be a she.

For a long time Jane commuted back and forth to work with me, traveling either in a cobra basket or under my coat and always clinging to a muff or rolled towel to simulate the natural mother. But as she outgrew her need for daytime feedings and got heavier and heavier (at two weeks she tipped the scales at 15½ ounces, today she weights 20 pounds) I began leaving her home and inadvertently started Jane's career as a two-toed house sloth.

Almost every zoo has a two-toed sloth. Inhabiting humid forests of Central America and northern South America, these sloths are readily available and are amazingly tough and hardy creatures (living 15 or more years in captivity), unlike the delicate three-toed variety that is almost impossible to keep. Both sloths belong to the order Edentata (toothless mammals) that also includes the anteaters and armadillos. (Of the three groups, only the anteaters are completely toothless.) While hardly the most popular or exciting zoo exhibit, a sloth's claim to fame is its peculiar upside down existence and sedentary behavior—sleeping about 18 hours out of every 24 — and indeed, so slothful is a sloth in the wild that algae grow on the fur, giving the animal a greenish cast, a decided asset in protective camouflage, the sloth's main defense. Although able to deliver fast and powerful slashes with the arms and to climb rapidly for short spurts when pressed, a sloth is certainly not built for speed. Nor is it built for traveling on the ground because of its foot structure and hooked claws. Whereas wild sloths are reported to be practically helpless on a smooth flat surface, Mary Jane is an expert at scuttling — almost swimming — from room to room across the floor on elbows and heels. But then she grew up in a city apartment sadly lacking in trees and jungly vines. She does, however, take advantage of runged furniture. Sloths are thought to be almost strict vegetarians, feeding principally on leaves, but Mary Jane's fondness for meat (naturally she prefers filet to sirloin) and other high-protein foods (fish, milk, eggs, cheese) leads me to believe that wild sloths ingest slugs, caterpillars, other insects, eggs, and nestlings at every opportunity.

Mary Jane's development in infancy was characteristically sloth — slow and deliberate. So slow and deliberate, actually, as to be maddeningly tedious. For instance, my records indicate that she

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was fed every three to four hours around the clock for the first five weeks. For the next 19 weeks she was fed every six hours. She drank milk from a bottle for 19 weeks, and she was hand-fed at least three meals a day until she was eight months old! (Spoiled beyond reason, she still uses all her wiles to be fed by hand.) And each feeding was interminable, or so it seemed. No animal in the world swallows as slowly or takes as long to down two cc. of milk formula as an infant sloth. In large measure I attribute Jane's survival to my sister who would often take over the midnight and 4 a.m. feeding when I could no longer go without an uninterrupted night's sleep. It was a long babyhood, and life became infinitely easier when Jane was finally able — and willing — to feed herself and all I had to do was to leave a plateful of fresh leafy greens, sliced apple, melon, pear or peach, sliced tomato, some cooked lean meat, and a fistful of shelled peanuts by her bed. Jane fitted easily into the household routine. She is unquestionably the most adaptable and equanimous wild mammal I have had. After graduating from her baby basket she took up residence under a bed, using a slat for a toe-hold. Beneath the record player is another favorite spot, as is the desk chair. But her most permanent home territory is a wooden jungle gym under which is a cardboard box into which she sinks and where she spends most of her time. Being nocturnal, Jane does most of her wandering silently at night. Never has she damaged furniture, for she is uncanny in determining what will support her weight without tipping over.

Sloths do have vocal cords but rarely produce a sound. Only once have I heard Jane vocalize and come forth with a goose-like "honk" of real distress. That was many years ago when I attempted (briefly) to put her in a cage minus her blankets, towel-wrapped hot-water bottle, and familiar surroundings. So chalk up a point for sloths as pets. They will never disturb your neighbors.

Whereas the rare three-toed sloths are reputed to tame readily and can be handled with impunity even as wild-caught mature adults, the two-toeds have a reputation for always being irascible, so we were curious to see how long Jane would stay tame. She has never been a pick-up-and-carry type. Even at the age of three weeks she panicked when forcibly unhooked from her ersatz muff mother. Nevertheless, she has always been willing to be transported from place to place while hanging on her wooden towel rack or clutching a pillow. As long as she has a firm grip on an object she considers sturdy (people aren't) all is well. Her disposition has always been predominantly gentle and affectionate. She is always happy to be awakened (slowly—*never* rush a sloth) to snuffle and press noses. (Perhaps she is only hoping for a peanut or piece of chocolate.) And although strongly imprinted (she thinks I'm her mother, albeit a frightfully nervous and fast-moving one) she is not a "one-woman" pet as many hand-reared wild animals are prone to be, but is friendly and outgoing even with strangers.

Also on the plus side for Mary Jane—and the reason she is able to be hook-loose and fancy free—is that she is housebroken. This is no major training feat on my part or even a happy accident on Jane's. It simply relates to the biological fact that unlike other tree-dwelling mammals such as monkeys, sloths have localized areas for depositing their droppings. As soon as she started climbing on her own Jane began using one corner of a small doorless cage as her latrine. And in that she hung from the top of this cage whenever necessary, it was a simple matter to put a pan under the chosen spot. In six and a half years she has never missed. Another plus factor is that adult sloths normally urinate and defecate only once a week, at five- to seven-day intervals.

The Edentates are not placed very high on the intelligence scale, but I am convinced that sloths are considerably smarter than they usually get credit for being. Jane has seen my sister seldom during the past four years, yet she will come barreling out of her box the minute she hears Bonnie's voice. MJ can also open an unlatched door, correctly pulling with her hooks when it swings in; pushing with her head when it swings out. If her box is moved she adapts immediately to its new location and never returns to its former position by mistake. She wraps herself in blankets when cold; kicks off covers when too warm. Jane dislikes dirt. If her corner gets dusty or her bedding is not aired regularly she simply vacates and takes up residence in another room. My mother-in-law



-Photo by Owen Duvall

The author touches noses with Mary Jane.

isn't half as fussy about my housekeeping. Or lack of it.

Being non-predators, sloths are unaggressive mammals. Even at her snappiest, Mary Jane asks only to be left alone, and other animals are basically ignored. Even a bouncy kitten in playful attack fails to disintegrate her cool. Swann and Flanders, I think, characterized sloths pretty well:

"For days and days among the trees I sleep and
dream and doze,
Just gently swaying in the breeze suspended by my
toes,
While eager beavers overhead rush through the
undergrowth,
I watch the clouds beneath my feet,
How sweet to be a sloth."

Alright. If Mary Jane is so great, what's all this fuss about wild animals not belonging in the home? It's true, and I'm still preaching. Here are a few of the reasons why. Wild animals bite. I never met a normal one that didn't. It is instinctive to use teeth in defense, and innumerable things can frighten even a tame animal. They are often nervous and insecure in close proximity with humans. Those hand-reared from infancy are prone to be one-man animals and may be shy with or dangerous to other people. Wild animals make considerable extra work and re-

quire much time. Many are difficult to feed, requiring specialized food or specific diets. It is often extremely difficult in a house to meet all the needs of a wild animal—adequate space and facilities (nest boxes, bedding, branches, etc), proper temperature and humidity, and so forth. Most wild animals are impossible to housebreak, and many will damage rugs, floors and furniture by the natural instinctive behavior of climbing, jumping, chewing, scratching, and digging. It is also typical for wild animals to undergo a disposition change at sexual maturity. Former tractable pets become aggressive and unwilling to be restrained in the urge to seek a mate, and as all wild animals can protect themselves in one way or another, the defensive/offensive tactics of even the smallest species must be treated with respect by soft-skinned humans. In short, wild animals are *not* domesticated ones, and too many perhaps well-intentioned but unthinking persons expect them to be. If you doubt me, ask any zoo switchboard operator. Where zoos seem to be the ideal repository for unwanted, no longer manageable wild pets, no zoo can possibly accommodate even a fraction of all its would-be donations. To return a native species to the wild can be cruel. A descended skunk, for instance, is defenseless, and semi-tame mammals of all types can fall prey to dogs, cats, and humans suspecting rabies. Conditioned to a captive diet from infancy, some animals cannot even find their own food when released. What's the answer? Don't get a wild pet. Or, if you do, be prepared to take considerable time and effort to meet its needs, and above all try to give some advance thought to a humane disposition of the animal if you run into serious trouble.

Are sloths the exception? The ideal wild pet? Far from it! Mary Jane bites. She has always been "mouthy" and at times gets downright crabby for brief periods. What is more, sloth bites are exceedingly painful, quick to become infected, and slow to heal. Possibly enzymes in the saliva tend to make it somewhat toxic. (I always ponder the question while nursing my occasional puncture wounds.) What saves me in Mary Jane's case is that it is so simple to avoid being bitten. One slow step to the side easily gets me out of range. Another help is that two-toed sloths have no front teeth (incisors or canines), but their modified molars are wicked.

Whereas Mary Jane is not nervous, easily frightened, or a menace to my long-suffering patient husband or visitors, she is far more trouble to care for than is a dog, cat, or parakeet. She requires a constant source of fresh produce, and I am forever shelling peanuts for her. She needs special

climbing apparatus for hanging upside down. Sloths dislike bright light, so a few dark corners are a must. Because of her bedding and blankets, she doubles my laundry. She suffers in winter from drying hot-air heat, so a humidifier runs for her. She eats my house plants.

Inevitably, last year there appeared the beginnings of adulthood. For more than a month in the spring, Jane's personality changed. She became very restless, hooked roughly, and tried to bite frequently. I also noticed for the first time a discharge from eyes and nose that she could curiously blink away or produce at will. Not only did this substance change her entire facial expression (eyes and nostrils ringed with strongly contrasting white) but she "marked" furniture with it. This phenomenon is known to occur in a few other mammals but to my knowledge it has never before been reported in sloths. And so once again I have a notebook going on Mary Jane, and once again I rationalize. Under the guise of "anything for science"—that we still can learn from this sloth—I am strengthened in my determination never to part with Dear Old Jane.

- Marion McCrane Wolanek

MEET THE RING-TAILS

Ring-tails and cacomistles belong to an unusual family of omnivorous carnivores that includes raccoons, coatis, kinkajous, and olingos from the New World and the pandas from southeast Asia. The ring-tail is primarily a westerner found from Oregon to southeastern Texas and south into Mexico as far as the state of Oaxaca. Mammalogists usually apply the name "ring-tail" to *Bassariscus astutus* and reserve "cacomistle" for a Mexican and Central American species, *Bassariscus sumichrasti*, but both names have been used interchangeably. Other vernaculars given to *B. astutus* are ring-tailed cat, civet cat, and miner's cat. The last came into use because many early-day prospectors kept the animals as pets or allowed them the run of their cabins to help control mice and wood rats. The scientific name, *Bassariscus astutus*, means "clever little fox".

Ring-tails are nocturnal and their presence is often unsuspected even where they are common. In the southwest they are partial to rough, boulder-strewn hillsides that include cliffs and ledges plentifully supplied with natural caves and deep crevices, but in parts of California and Oregon ring-tails are more arboreal, preferring den locations in

natural cavities of large trees such as oaks. Apparently they do not construct their own dens. The altitudinal range is sea level (in California and Oregon) to about 8,000 feet.

Although usually thought of as rare or uncommon, ring-tails may be the most abundant small carnivores in certain parts of their range, such as the national parks and monuments of Utah and Texas where they undoubtedly serve as one of the principal natural checks on rodent population explosions. The species does well in captivity and quickly becomes tame, especially if captured young. Longevity records of 11 to 14 years have been recorded for animals living under zoo conditions. Breeding records, however, are rare in zoos, although pairs kept as pets have produced and reared young when provided with ideal conditions. Ring-tails are best exhibited in a nocturnal room under reversed lighting. Otherwise, the species has a poor exhibit potential, preferring to remain hidden or curled up asleep during regular visiting hours. One I kept for two years usually became active shortly after dark. After eating she amused herself for most of the night by playing with a golf ball or catching moths. When excited or restrained ring-tails may secrete a musk from glands located in the anal region, but the scent is not sprayed and lacks the disagreeable odor of skunk or mink musk.

The pair presently on exhibit in the small-mammal house illustrates how species respond to environmental conditions. Our recently acquired female represents a dark-colored sub-species found in the humid, heavily forested parts of southwestern Oregon and northern California. The much paler male

is from the arid southwest where light colors are an advantage. Deer mice (*Peromyscus maniculatus*) from the same two regions show similar adaptations in color.

Ring-tails are of little economic importance and almost never come into direct conflict with man's interests. About 70 per cent of their food consists of rodents, most of which are at least potentially harmful to crops and stored food supplies. Fruits of many kinds are readily eaten, but ring-tails are seldom found near orchards. Most of the birds captured are brush and ground dwellers, such as sparrows, thrushes, and towhees. My pet was fond of grasshoppers.

In some areas ring-tails are trapped for fur, but the price received seldom exceeds five dollars and usually averages under a dollar. A fur dealer I worked for in Oregon during the early 1930's sold a small consignment of ring-tail pelts to an eastern furrier who then removed the distinctive tails, dyed the skins, attached marten tails left from furs used for coats, and had the results of his handiwork made up into ladies' neckpieces. This took place long before "truth in advertising" and at a time when sheared muskrat was sold as Hudson seal and several other things. It would be of interest to know what those ring-tails were called when they were finally merchandised. At the time, ring-tail hides were bringing trappers about two dollars each, while prime martens were averaging over thirty dollars per skin.

- Harold J. Egoscue

HOW DO WE RATE?

In a recent survey of the large zoos of the United States taken from data in the 1970 AAZPA Directory, our Zoo rates as follows:

Zoo	Species	Attendance	Acreage	Budget	Employees
San Diego	1st	2nd	4th	1st	1st
Los Angeles	2nd	6th	5th	3rd	4th
Bronx	3rd	4th	1st	?	2nd
San Antonio	4th	8th	7th	6th	7th
St. Louis	5th	3rd	8th	5th	5th
Forth Worth	6th	7th	9th	9th	9th
Nat'l. Zool. Park	7th	1st	3rd	2nd	3rd
Columbus	8th	10th	6th	7th	?
Dallas	9th	9th	10th	8th	8th
Milwaukee	10th	5th	2nd	4th	6th

NEW BOOKS

The Last of the Loners, by Stanley P. Young, illus., 316 pp., Macmillan, N.Y., 1970. \$9.95

"The Last of the Loners", by Stanley P. Young, is a noted ecologist's narrative of North American wolves—the great predator beasts now faced with possible extinction.

When the echoes of the last stroke of the axe that felled the first tree in America's forest primeval died in the crash of falling timber, the worthy colonial woodsman who had done the job didn't realize what he had started. Since that day the country has spent untold millions trying to make up for what he had done to upset the applecart and destroy the balance of nature.

"The Last of the Loners" is particularly timely because it is the tragic story of the destruction of one of the predators which is a part of the unbalancing of nature caused by the greatest predator of all, man himself, who has done so much to destroy himself.

The book reflects some of the adventures of the adventurous Stanley Young, who died in 1969, leaving the manuscript of one final book. It also does much to explode the myth of the "Big Bad Wolf" which has come down to us through folklore and fiction. The author leaves no doubt in the reader's mind that his duty as executioner was a painful one. He has a great respect and admiration for the intelligence and almost uncanny ingenuity of the wolf and shows how his virtues have been turned to evil by man's stupidity and greed, which are back of most of the unwise and selfish exploitation of our natural resources.

It is good lively reading and to use a popular adjective it is certainly "relevant".

-H.R. Baukhage

Beastly Inventions by Jean Craighead George. David McKay Co., New York, 1971. 216 pp. \$6.95

For many years Jean Craighead George has been collecting accounts of the strange ways in which animals conduct their lives and adapt to their environment. "Beastly Inventions, a surprising investigation into just how smart animals really are" is a delightfully written book and full of interest to the lay reader. Some of the inventions she describes are well known but others were not to this reviewer. The Hydra travels, for instance, by turning cartwheels, the click beetle by dislocating his

back, the starfish by means of hydraulic pressure. Of the hummingbird Mrs. George says it is earth's "most incredible stunt flyer. By maneuvering wing and feathers it can perform feats no man-made machine can begin to approach, for the hummingbird travels forward, backward, sidewise, and hovers in one place for more than an hour without showing the slightest sign of breathlessness or fatigue."

In the chapter on courtship and sex, some extraordinary means of reproducing the species are described, ranging from amoebae to whiptail lizards (there are no male whiptails, ever) to oysters, box turtles, bowerbirds, kangaroos, and porcupines. "Wonderful Homes" tells of the pocket in the belly of the male sea horse, where the female lays her eggs. The swift of Indo-China makes a nest of saliva, the fox squirrel understands a principal of insulation - dead air spaces - which he uses in his winter nest. And of course the beaver's lodge and dam come in for a detailed description of the builders' ingenuity.

Other chapters on "Unusual Parents and Youngsters", "Diners of Unlimited Imagination", "Deceit and Aggression", and "Inventive Ways to Live with Man" support the author's conviction that animals of any phylum are smarter than we realize.

The book is easy reading. Mrs. George has combined results of her research and her own personal observations with humor and charm.

- L.Q.M.

THIS AND THAT FROM FONZ

Gifts: We would like to thank the following people very much indeed for their generosity in giving us the following: Mrs. R. Daniels for a movie projector, screen, and movie editor; Mr. and Mrs. R. Lahr for a 16 mm. slide projector; Mrs. F. Edelstein for a record of animal sounds; Mrs. C. Hall for an electric clock; Mrs. S. Lambert for a bookcase.

The following have kindly contributed books to the Guide Library: Mr. and Mrs. T. Babbitt, Mrs. G. Bidlack, Mrs. L. Mann, Mrs. M. Preston, and Mrs. W. Siddall.

Guide Program: We would like to welcome the 17 new guide trainees who, after their five-day training program, will soon be added to our total of almost 50 FONZ Guides. One of our new guides, Mrs. Kelso, will be starting our bilingual program with tours in Spanish.

Our very special thanks to Mr. Warren Iliff, Special Assistant to the Director of the National Zoo, for all his help, and to the Zoo staff for the time and effort which insured the success of the program.

We wish to thank Larry Collins, from the Scientific Research Department, for his talk to the Guides on marsupials. We are also grateful to the Australian Embassy for the loan of the film "Birth of the Red Kangaroo."

Help Needed: The office is in desperate need of help for processing memberships, preparing special mailings, answering inquiries about FONZ, and the other daily tasks basic to the functioning of the organization - in other words, secretarial work. As there is no paid secretarial help for the office, and

as we are basically a volunteer organization, members can make a real contribution in this area.

Volunteers for one day a week, 10 a.m. to 3 p.m. or for half days, please call Mrs. Dodd at 232-4555. You will be made most welcome!

Mrs. William Wright, who has been such a great help to us in the office every Wednesday, is unfortunately unable to continue due to ill health. We wish her a speedy recovery and look forward to having her back with us.

New Decal Available for Members Only:

For 25 cents plus tax and postage, the office will send you a blue and red "Friends of the National Zoo, Washington, D.C." decal for car, luggage, etc.



"To operate exclusively for educational and charitable purposes, and in particular to educate the general public on matters relating to the increase and improvement of the facilities and the collection of the National Zoological Park, and to foster its use by the general public and the schools for educational purposes"—

Memberships:



Contributing	\$25.00
Family	15.00
Regular	7.50
Student	3.00

All memberships include subscriptions to SPOTS AND STRIPES, invitations to special events, annual meetings, and Zoo Night. If you wish to join, send in your name, address, and telephone number with check payable to Friends of the National Zoo, c/o National Zoological Park, Washington, D.C. 20009.